

1/26/59

AREA K

Pier 4 and T Piers

Summary

<u>Item</u>	<u>Plant Acct. Cost</u>	<u>20-yr. Est. Non- Routine Maint. Cost</u>
North T Pier	\$ 58,800	*
South T Pier	58,800	*
Pier 4	1,276,300	*
Bulkheads	50,000 (Est.)	\$ 25,000
	<u>\$1,443,900</u>	<u>25,000</u>
	10% Ov'h'd	2,500
		<u>\$ 27,500</u>
Averages:		
Est. non-routine maint. cost per yr., Area K		1,375
Tot. est. routine maint. cost per yr., Area K (incl. 20% Ov'h'd)		1,150
Est. portion of annual guard cost, Area K		1,320
Tot. est. maint. & security costs, Area K, per yr.		<u>\$ 3,845 * *</u>

*No non-routine maintenance planned. Recommend effort be made to have maintenance requirements waived in terms of National Security Clause.

**Routine maintenance costs are based on a crew of 10 men and 1 supervisor performing continuous minor maintenance assumed to be in the ratio of 70% on care of preservative treatment of equipment (Class III property) and 30% on improvements (Class II property).

An estimated charge of \$5000 per year for material is included as well as 20% overhead. The total is then apportioned to the various areas in the ratio of the plant account costs of improvements and equipment in the areas.

Guard costs are based on the continuance of the now-existing contract with a detective agency for security of the premises. It is assumed that 2 guards would be continued on duty at all times. Cost per man hour of guard duty is taken as \$1.75 without any additional costs. The total cost is then apportioned to the areas on the basis of plant account costs of improvements in the areas.

Total maintenance and security costs do not include charges for utilities or insurance which are dealt with in Part III.

1/27/59

AREA K - PIER 4 and NORTH & SOUTH T PIERS

PIER NO. 4

Plant Acct. Cost

\$1,276,300

Gen. Info.

- Originally built in '42 for outfitting ships. Used by Todd Shipyards, Inc. until '46. West edge faces Port Industrial Wwy. and encroaches 15' into waterway beyond Gov't pierhead line. Of total length 2800', N. 327' is 175' wide, remainder 127' wide. In original construction mineral cell treated fir piling used for offshore and untreated fir piling for inshore locations. Caps, stringers, decking untreated timber. In '44 due severe infestation and damage, all original piling replaced or encased in concrete from mud line to plus 5 ft. tide. At craneway each existing bent reinforced with intermediate 2-pile bent. In '46 concrete mooring islands on creosoted timber piling supporting bollards and bitts built into pier for extended berthing of Naval vessels. New utilities services and automatic dry-pipe sprinkler systems also installed. Sprinkler systems now shut off for winter months to prevent freezing.

Pier 4 is now in advanced state of deterioration, having been closed to all except light traffic for many months. Five whirley cranes, formerly operating on pier, have been removed to inshore parking for safety reasons. Several projects have been initiated for partial rebuilding, complete rebuilding, or complete replacement of the pier. To date no action toward accomplishment has been taken.

Discussion

- Pier 4 is now deteriorated to the point where it can serve no useful purpose "as is". Reconstruction has been estimated at \$3,306,375, replacing approximately 20% of the piling and replacing all untreated superstructure with treated timber. No estimate of funds for the non-routine maintenance of Pier 4 is included in this study.

1/27/59

AREA K - PIER 4 and NORTH & SOUTH T PIERS

North and South T Piers

Plant Acct. Cost

\$ 117,600

Gen. Info.

- Both piers constructed '46 for specific purpose of mooring inactive Naval vessels. Located west of Bldg. 203 and extend into Port Industrial Wwy. Approx. 250' long each, concrete mooring island each end with narrow concrete deck approaches all on creosote treated piling. Lower section of piles under approaches encased in concrete in '52. No crane service on piers.

Discussion

- Use of T Piers not anticipated for shipbuilding purposes. Type of construction not readily adaptable to maintenance. No estimate of funds for other than their minimum routine maintenance is included in this study.

1/26/59

AREA K - Pier 4 and North and South T Piers

Bulkheads

Previous to the disestablishment of the Tacoma Naval Station a special project had been initiated for the reconstruction of the inshore bulkhead and portions of Pier 4. The 13th Naval District Office, in forwarding the project to the Bureau of Yards and Docks, recommended the accomplishment of the reconstruction of the inshore bulkhead at an estimated cost of \$550,000, the remainder of the project to be deferred pending further study. However, with the disestablishment of the Station imminent, no action was taken on any part of the project.

The bulkhead in question extends for approximately 2500 feet along the inshore edge of Pier 4 and serves to retain the fill on the land side which in turn supports a roadway and other land area. Approximately 900 feet of 6-inch steam main which supplies heating service to Bldgs. 391, 341, 397 and others in the 300 number series is suspended under Pier 4 just outboard of the bulkhead.

The previously mentioned special project proposed the following:

1. Replacement of the deteriorated bulkhead with a new steel sheet pile bulkhead and cap.
2. Backfill and rip-rap as required.
3. Repairs to roadway.
4. Relocation of steam main to new inshore steam duct.

Recent inspection of this bulkhead shows that rip-rap extends to within approximately 2 feet of the top of the bulkhead. Under this condition it is anticipated that no serious difficulties will be experienced due to continued deterioration of the bulkhead. Complete rebuilding is not considered necessary until such time as Pier 4 may be rebuilt.

The bulkhead inshore of the T Piers lies just south of Pier 4 and extends for a distance of approximately 1400 feet along the Port Industrial Wwy. This bulkhead was rebuilt approximately 1951 with creosoted timber. Rip-rap conditions along this bulkhead are reasonably good and no difficulties are anticipated other than what can be corrected by occasional repair.

A nominal figure for repair of the subject two bulkheads is included.

Est. cost of bulkhead repair (20-yr)

\$25,000

1/26/59

AREA L - EQUIPMENT

Area L does not represent a geographical subdivision but is included as a means of accounting for certain equipment and miscellaneous items not discussed elsewhere in this section.

The Navy Plant Account Inventory dated 1 Oct. 1958 shows \$2,852,432.80 as the cost of major items of priced equipment. This equipment includes whirley and bridge cranes, shop machines, air compressors, construction equipment and many other equipment items. Also in the inventory is a listing of 2658 entries of minor unpriced items located in 48 buildings though the majority is found in 2 buildings. This minor equipment consists of drills, reamers, hand tools, gages, meters and many miscellaneous small items.

Recent casual observation shows that the major portion of the equipment has been preserved with corrosion preventative compound. A few exceptions were observed, notably some sets of taps and dies and other small equipment which had not been treated. Some instances were noted where touch-up treatment of shop machines is required. No equipment is in heated storage though some instruments were noted which preferably should be so stored. No heat is provided in whirley crane cabs. It is understood that small heaters previously had been installed in some cabs, but the results did not justify continuance. Paint on whirley and bridge cranes is now good and estimates for repainting during the 10-year maintenance period for equipment have been included in Part II.

An estimated cost of \$100,000 has been included in Part III for initial care of the equipment items. This is to cover the cost of inventory, preservation or re-preservation where needed, centralizing storage to the greatest possible extent and providing heated storage for instruments.

Past experience indicates the need of continuous inspection and occasional renewal of the protective film where deterioration is found. It is intended that this work be the responsibility of a routine maintenance crew. A crew of 10 men and 1 supervisor is proposed for the premises. Maintenance material is estimated at \$5000 per year and an overhead charge of 20% is carried. Experience gained at other similar activities indicates that about 70% of this crew's efforts will be required on the care of preservative treatment of equipment, the remaining 30% on buildings and improvements in general. This approach has been used in estimating routine maintenance costs for improvements and equipment in the several areas of the premises in other parts of this section.

SUMMARY

Costs for care of equipment have been covered generally in Part III and in the studies of the several areas in which the major part of the equipment is located. To account for miscellaneous routine maintenance and guard costs which

1/26/59

do not appear elsewhere the following are included in this area:

Estimated miscellaneous routine maint. cost per yr., Area L	\$ 1400
Est. miscellaneous guard cost per yr., Area L	<u>4800</u>
Total est. misc. routine maint. & guard costs per yr., Area L	\$ <u>6200</u>

1/26/59

PART III

MAINTENANCE COST & OVERHEAD

GENERAL

Estimating maintenance and overhead costs over 10, 15 and 20 years for equipment, timber structures and other improvements, involves consideration of a range of experience characterized by wide variations. In every case, effort has been made to recognize extremes of experience and to reach sound conclusions based on reasonable averages as to measures to prevent "rapid deterioration".

BUILDINGS

A relatively high standard of building maintenance was in effect until disestablishment as a Naval Station Sept. 30, 1958. Exterior painting, roofs, gutters, etc., appear to be in good condition in general with the notable exception of the roof on Bldg. 576 which leaks in numerous places. To avoid undue deterioration, concrete footings have been installed under exterior walls in some buildings to replace wood sills originally installed at or below grade level. Examples are Bldgs. 391, 397, 351, 321 and 576. Bldgs. 351, 391, 203, 540, 510, 512 and 50 have been completely or partially painted during the past year. A new roof has been recently put on Bldg. 361; however, the majority of roofs apparently range from 5 to 15 years in age. Roofs on Bldgs. 203, 407, 532, 391 and 397 have been hot mopped and patched where required within the past year.

PIERS

Pier 4 is not useable and is not being maintained.

Caps, stringers and decks of Piers 2 and 3 and of timber section of Pier 1 were replaced in '53 to '55, but another replacement must be provided for before 1974. This is the major non-routine maintenance item.

The outboard section of Pier 1 is concrete superstructure on concrete piling. The two T Piers are concrete superstructure on treated timber piling. No major maintenance requirement is expected for 15 years.

Detailed maintenance requirements are contained in Part II, Sections B, C and ~~III~~ K.

EQUIPMENT

The property inventory for the Naval Station dated Oct. 1, 1958, lists equipment with a plant account cost of \$2,852,432 in addition to 2658 entries of minor unpriced equipment. Included are whirley cranes, bridge cranes, shop machines, drills, reamers, meters, gages, etc. Preservation of much of this equipment has been accomplished by Naval Station personnel over a considerable period of time starting in the late 1940's. See pages 2-11, et seq. for details.

STEAM PLANT

The central boiler plant in Bldg. 529, built in 1947, was designed to supply 40,000 pounds of steam per hour at 100 PSI to a relatively extensive underground distribution system, providing steam service to Piers 1, 2 and 3, and to 4 hot water converter plants which furnish heating service to buildings in the main section of the premises. The three watertube boilers have been dried out and pans of lime have been placed in the drums. Firesides and interiors of the smokestacks have been coated with preservative oil and the smokestacks have been covered. Auxiliary equipment has been cleaned and coated with corrosion preventative compound. This plant will require continuous routine care of the preservative treatment.

It is intended that this work can be accomplished by the routine maintenance crew for which estimates of salary, material and overhead are included in the summary of maintenance costs.

MAINTENANCE

ASSUMPTIONS

To arrive at an estimated maintenance cost, based on current costs of labor and materials, the following assumptions are made:

- (1) To provide basic cost figures from which to work, estimates are based on requirements for maintaining the facility in unoccupied, inactive status with minimum maintenance necessary to keep the buildings in essentially "as is" condition, the effects of age within the limit of effective utilization excepted.
- (2) The period for which maintenance will be required is assumed to be 15 years from the date of transfer of title for buildings, and 10 years for equipment. However, full 20-year maintenance would be required of approximately 4 major buildings and 12

1/26/59

minor buildings not of timber construction.

- (3) Roofs will need to be replaced once in the 15-year period with some additional repair and hot mopping.
- (4) Exteriors of the buildings, with some exceptions due to type of siding, will require painting twice during the 15-year period.
- (5) Gutters will need replacement once in addition to some repair during the 15-year period.
- (6) An estimated amount to cover routine maintenance is included. This is intended to cover minor structural deficiencies, repairs to sprinkler systems, water piping, electrical systems, etc.

Considering the foregoing factors, a study of probable maintenance costs was made for 35 of the major buildings on the premises. An additional allowance was then made (approx. \$75 per year per building) for the care of some 82 other small buildings. The estimate thus computed is in addition to that of the necessary small standby maintenance force, the cost of which is estimated hereafter.

ROUTINE MAINTENANCE

It is believed that routine maintenance can be accomplished through the years by 10 maintenance men and 1 supervisor. To their cost has been added the 20% overhead which the Port has experienced in handling similar payroll. It is recognized that on the quality and quantity of their work will depend the success of the maintenance program. Their work will largely be away from direct continuous supervision. They must be temperamentally suited to such work and conscientiously dedicated to high standards of volume and quality.

The current 90-day contract, renewable for two 90-day periods, under which the premises are now being maintained provides for 7 maintenance men and 1 supervisor. This force may be adequate for a short period, particularly in view of the high standards in effect at time Naval Station was closed. But it is believed that any less than 10 maintenance men and 1 supervisor will not be able to maintain satisfactory standards through the years. Furthermore, it is understood that this is the force which the Bureau of Ships contemplated had maintenance remained under their cognizance.

Distribution of routine maintenance and guard costs is made in Part II.

1/26/59

NON-ROUTINE MAINTENANCE

It is assumed that most non-routine maintenance will be accomplished by contracts. An overhead cost of 10% has been assigned. Although this is low for small contracts, much of the dollar volume of non-routine maintenance would be by large contracts such as for pier rebuilding. It is, therefore, believed that 10% is adequate.

Detailed estimates of non-routine maintenance are made in Part II.

Three uncompleted Naval Station Projects were pending in '58:

- (1) Replace bulkhead at Pier 4, \$550,000. Condition of rip-rap indicates no leakage of fill. It is believed minor repairs will serve until such time as Pier 4 is rebuilt. (See Page 2 K-5).
- (2) Install asbestos siding on Bldgs. 50, 203, 351, 391, 397, 544 and 588. Estimated cost \$108,000.

These buildings are of wood frame construction with single course wood siding. To afford better protection and eliminate frequent repainting, a project was submitted proposing the installation of asbestos siding on all seven buildings. Areas to be covered were:

Bldg. 50, Warehouse & Office	47,500 sq. ft.
Bldg. 203, Warehouse & Office	59,500 sq. ft.
Bldg. 351, Recreation Bldg.	32,000 sq. ft.
Bldgs. 391 & 397, Shops & Warehouse	74,600 sq. ft.
Bldg. 544, Mold Loft	26,500 sq. ft.
Bldg. 588, Shop Bldg.	31,000 sq. ft.
	<u>271,100 sq. ft.</u>

There is no indication that any action will be taken by the Navy. Therefore, the cost of painting these buildings has been included in maintenance costs in Part II.

- (3) Replace fence around Salvage Yard south of 11th St., \$15,000. Posts require early replacement. Long-range economy dictates entire replacement by chain link fence. (See Page 2 H-4)

1/26/59

INSURANCE

Insurance is not now included in estimate of overhead because the Government's requirements are not known and because it can be safely assumed that its cost will be relatively small. The Port's excellent fire loss record is pertinent.

It is believed that in view of the age of improvements and equipment, and the absence of any applicable depreciation reserve funds, the Port can be expected to assume obligation for any loss only to the extent of proceeds of insurance.

ADT AND GUARDS

The premises are protected by American District Telegraph Co. sprinkler and watchman warning service at a cost of \$14,400 per year. This service should be continued. In view of current and recommended practice of requiring one guard to be in Guard House while the second is making rounds, future consideration should be given to savings which can be expected by providing equivalent warning system in Guard House to replace ADT service.

The Government's maintenance contract now provides for 2 guards continuously on duty. It is recommended that this practice be continued. Provision therefor is included in estimated maintenance cost.

DREDGING

The extent of information as to depths of water adjacent to the premises is as follows:

1946 - P.S.B. & D. dredged adjacent to T Piers and Pier 4 to within 5' of pier line to -28.0' from 11th Street Bridge 1250' to Northwest, and thence to end of Pier 4 to -30.0'. Depths confirmed by soundings in May '47 which also showed -28.0' off finger piers.

1951 - Dredged off Commissioning Pier in May from -31.0' to -36.0'.

1951 - Check soundings off Piers 1, 2 and 3 showed depths below -28.0'. No records made because area not completely covered due to presence of CVE's.

1952 - Soundings off South T Pier showed 5' silting since '47.

No other dredging done since '45.

1/26/59

It is believed that no dredging will be required in the foreseeable future. Soundings by Army Engineers in March '58 (their Hylebos Wwy. File E-3-2-72) confirms this conclusion.

ROADS, RAILS AND DISTRIBUTION SYSTEMS

In estimating maintenance costs from a realistic point of view, certain calculated risks have been taken. Budoeks policy disseminated in 1956 confirms our standards for differentiating between what probably must be done and what probably need not be done. The following extracts are quoted from Navdocks TP-PW-31, Change 2 of Dec. 5, 1956, Section G 2.03:

- "1. All Government-owned facilities shall receive adequate maintenance and protection to minimize hazards to personnel and public health, and of fire or damage to other facilities.

* * * * *

- "7. In general, railroads, roads and underground utilities required for mobilization purposes in reserve plants will not be repaired unless such repairs are essential to current operations or fire or security protection, except as may be required by Item 1.
- "8. No expenditures shall be made for shipways, except in unusual circumstances, since possibilities exist for redesign of such shipways before their need, except as may be required by Item 1."

Accordingly, it is assumed that no non-routine maintenance and minimal routine maintenance will be required on these facilities when not in current use:

- a. Roads
- b. Railroads
- c. Oxygen System
- d. Acetylene System
- e. Compressed air distribution system.
- f. Underground electrical system
- g. Steam distribution system
- h. Hot water heating distribution system
- i. Domestic water system
- j. Shipways and Craneways (now useless)

The firemain must be maintained to meet the requirements of Item 1 above. For non-routine maintenance of this system \$1000 per year is carried in the estimated maintenance costs.

1/26/59

SUMMARY OF MAINTENANCE COSTS (See Part II for Details)

MAINTENANCE COSTS DISTRIBUTED TO AREAS

Guard Force, 2 guards continuous, by contract (distributed to areas) annual	\$ 30,660
Routine Maint. Crew, 10 workmen, 1 supervisor \$5000 material and 20% Ov'h'd (distributed to areas, except Bldg. 529) annual	87,189
Estimated Average Annual Non-Routine Maint., incl. 10% Ov'h'd (distributed to areas)	<u>171,284</u>
Total Average Estimated Annual Maintenance Cost	\$ 289,133

OVERHEAD (not distributed to areas)

Firemain	\$ 1,000
Utilities, Annual	8,000
Bldg. 529 (Central Steam Plant)	2,000
Telephone, Annual	500
ADT Services, Annual	<u>14,400</u>
Total Estimated Average Annual Overhead	\$ <u>25,900</u>
Total Estimated Average Annual Maint. & Ov'h'd Cost	\$ 315,033

1/20/59

PART IV

Potential Uses and Income

Shipbuilding is the highest and best use of the premises. But commercial shipbuilding in peace time would not require the entire premises. The highest and best use of the balance includes chiefly cargo handling and light manufacturing, facilities for which would be adaptable to the fitting out requirement of a wartime shipbuilding program requiring the entire premises.

While all the ways in many shipbuilding yards are now occupied, it is understood that virtually all yards are seeking contracts for existing facilities which are uncommitted for a year or two hence. The Port cannot count on leasing for shipbuilding land which does not possess shipways or craneways. However, particularly in view of the history of wide geographical distribution of Government shipbuilding contracts, leases for shipbuilding should be aggressively sought.

Cargo handling on the Port Industrial Waterway frontage would require multi-million dollar investment in pier and transit shed construction. It cannot be counted on in the foreseeable future.

All substantial payroll uses of the premises require extensive parking area in addition to space available northwest of 11th St. During the war buses were operated between industrial area of the yard and parking area distant 3/4 mile, southeast of 11th St. This lack of convenient parking area is a handicap.

Other sources of income from the premises, utilizing existing facilities, are as follows:

<u>Ship Repair - Area B</u>		
2 Berths @ \$100/day each	6,000	
76,000 sq. ft. machine shop space @ \$1.5¢/mo.	1,140	
6,000 sq. ft. office space @ 4¢/mo.	500	
2 Whirley Cranes @ \$500/mo.	<u>1,000</u>	8,640.00

Notes: (a) Equipment would have to be provided and set up in bldgs. adjacent to berths. Some equipment could be leased.

(b) Ship repair work is being sought by companies possessing ready-to-go facilities.

<u>Ship Scrapping - Area C</u>		
2 Berths @ \$100/day each	6,000	
20,000 sq. ft. open storage @ 1¢/mo.	200	
5,700 sq. ft. shop space @ \$1.5¢/mo.	85.50	
2 Whirley Cranes @ \$500/mo.	<u>1,000</u>	7,285.50

1/20/59

PART IV (Cont.)

NOTE: It is understood that companies with existing idle facilities are interested in shipbreaking but that 2 recent offerings by Govt. of ships to be scrapped brought no bids.

<u>Light Manufacturing - Area D</u>	4,545.00
303,000 sq. ft. factory space @ 1.5¢/mo.	
<u>Office Space - Area E</u>	
109,000 sq. ft. office space @ 4¢/mo.	4,360.00
<u>Warehousing - Area F</u>	
228,000 sq. ft. warehouse space @ 3.5¢/mo.	7,980.00
<u>Dead Storage - Area G</u>	
317,000 sq. ft. covered storage @ 1.25¢/mo.	3,962.00
<u>Open Storage - Area H</u>	
1,037,728 sq. ft. fenced open storage @ 1.0¢/yr.	<u>865.00</u>
Total estimated at full occupancy monthly	37,637.00
at 50% occupancy	18,818.00
Total per year at 50% occupancy	225,816.00

There is no foreseeable income to be derived from apartments in Area J, Pier 4, or the two T piers.

Rental of equipment other than set forth above in Areas B and C is not likely to produce appreciable income. Its availability may help, however, in attracting tenants.

PART V

Recommendations

You requested the preparation of this report to assist you in arriving at the maximum amount which you may prudently offer for purchase of the subject property. Basically, this amount would depend upon the prospective use value of the property to you. My conclusions as to the use value of the subject property, present and prospective, giving consideration to the land, improvements and equipment, and to the maintenance burden which will have to be assumed by you under the terms of a National Security Clause agreement, may be summarized as follows:

(a) Land Value

Based upon actual sales by Port of Tacoma in the last three years of tracts of industrial property comparable to the several areas of the subject property, the fair market value of the land involved is, in my opinion, about \$7,500.00 per acre for 24.5 acres and \$5,000.00 per acre for 158.2 acres, being an aggregate fair market value of \$974,750.00. However, your possible uses of this land will be substantially circumscribed by the limitations of the National Security Clause, during its effective period. This means that if you include as a component of your offer the full present fair market value of the land, then to the extent your use is so limited you would be carrying an unproductive investment at an annual cost of five percent on the unproductive part, or upon the difference between the full value of an unrestricted fee title and the fair market value of the land subject to the restrictions of the National Security Clause. There is no way to presently demonstrate or accurately evaluate this difference, but a somewhat arbitrary assignment to it of fifty percent of the market value would leave a value to you of the land, subject to the security clause, of approximately \$500,000.00

(b) Improvements

The average age of the improvements weighted in accordance with the amount of original investment in each unit has not been calculated, as no useful purpose would be accomplished by so doing. It is sufficient to draw your attention to the fact that all of the major buildings are at least sixteen years of age, and seven of them are twenty-nine or more years of age. With two exceptions they are of wood frame construction. Some of these buildings have already reached the end of their economic useful life and the others may, on the average, be expected to have a remaining life of less than

ten years. In any event, their average remaining life is certainly a period shorter than the twenty year period of the National Security Clause. As these buildings reach the end of their economic useful life, they will cease to be a source of any actual or potential revenue to you. However, the maintenance obligation as to them will also cease and accordingly it may be assumed that the estimated annual deficiency of income to meet maintenance and custody costs will remain fairly constant over the term. This annual deficiency is summarized from the preceeding parts of this report as follows:

Estimated average annual maintenance of entire premises	\$ 315,033.00
Estimated annual income from useable parts of premises assuming 50% occupancy (No revenue from occupancy of ship construction area included - see Part IV)	<u>225,816.00</u>
Estimated average annual operating deficit	\$ 89,217.00

The estimated rental rates were arrived at after a study of rates being obtained by Port of Tacoma for warehouse and office space at its existing terminal properties. They are based on bare rental, assuming tenants will pay for all utility services such as electricity, water, garbage, janitor service and heating.

The opinion has been expressed by informed persons whose judgment the writer respects that the subject property would be worth more to you without any improvements on it than it is with the existing improvements but subject to the burden of their maintenance, and this opinion may well be true. Certainly the risk of a substantial loss to you over a long period of years would be greatly minimized if you were not faced with the necessity of acquiring these improvements and assuming the maintenance and custody with which you will be burdened.

(c) Equipment

Little need be added to what is said about equipment in the footnote on page 2-A 2 and on pages 2-L 1 and 2-L 2 and 3-3. You may find uses for some of the larger items of equipment which will produce some revenue. As against this, you must provide maintenance and storage space for the unused equipment for a ten year period. At the end of that period you cannot expect that your gross realization from the equipment will be in excess of its then value per ton as scrap.

(d) Additional Cost and Expense

In addition to the maintenance and custody obligation under the National Security Clause, you will have other costs and expenses in administering

this property. No attempt has been made to list or evaluate these in detail, but some of them are as follows:

- (1) General administrative and supervisory expenses for management of the subject properties.
- (2) Cost of advertising for, contacting, and negotiating with prospective tenants.
- (3) Delay in reaching the estimated fifty per cent occupancy. Six months ago you had two prospective tenants for portions of two of the areas of the subject property, if they had then been available to you for leasing. In the intervening months the interest of one of these prospects has ceased altogether and the interest of the other prospect has considerably diminished. This is referred to in order to direct your attention to the fact that the ultimate predicted fifty percent occupancy will undoubtedly not be realized for several years. An average occupancy of perhaps twenty percent in the first year with annual increases of about five percent per year until the fifty percent level is reached is thought to be realistic.

There are some additional considerations which tend to alleviate to an extent the unfavorable conclusions which must be drawn from the foregoing. They include:

(A) Possibility of relaxation or removal in whole or in part of the National Security Clause prior to its initial stated period.

(B) Possibility of utilization of Area "A" for commercial ship building.

(C) The community benefit which will result from such payrolls as are generated from those portions of the property you are able to utilize.

(D) It is to be expected that a National Security Clause agreement will provide for annual or periodical inspection and a survey of the improvements, and when individual buildings reach a condition that deferred and current maintenance is not economically justified, the Port will be given the option of razing the structures.

(E) In view of the physical depreciation and obsolescence existing in the subject property when considered for war time shipbuilding operations and the probably negative value of the improvements for other purposes when the burden of maintaining them is considered, it would appear reasonable that the terms of the National Security Clause would leave it optional with the Port of Tacoma to

carry such insurance upon the improvements and upon the equipment as it deemed desirable, and the obligation in the event of loss would be limited to reconstruction of the damage to any premises which may be insured or payment to the United States of the proceeds of such insurance as the Port may have elected to carry upon the damaged premises.

Whether the National Security Clause will ever be removed from or relaxed with respect to a portion or the whole of the property prior to the dates fixed in the initial agreement is wholly speculative, and no doubt dependent upon developments in the field of national defense needs and policies. Nevertheless such possibilities are not so remote that you are not justified as a matter of business judgment in giving consideration to them in arriving at the amount of your offer. The facilities are now at an advanced age and the property as a whole is obsolete and inadequate for the purposes for which it was originally assembled and constructed by the Government. Physical depreciation, particularly with respect to facilities you are not able to put to use, may be expected to accrue at an accelerated rate from now on.

Originally the General Service Administration requires initial payment of twenty percent of purchase price, with balance in ten equal annual installments. If Port of Tacoma is not able to make a cash offer for the subject properties, it would appear reasonable that the initial payment of twenty percent of the purchase price should be reduced by the estimated cost of inventorying and other immediate costs in connection with the custody of equipment (Item "b" in the following paragraph) and the cost of replacing the fence in the area south of Eleventh Street (Item "c" in the following paragraph), thus reducing the amount of the initial payment by \$115,000.00 and leaving this sum to be added to the remaining eighty percent to be paid in equal annual installments. In view of the period of several years when maintenance and custody costs must be borne but fifty percent average occupancy will not be realized, it would appear reasonable that the remaining balance of the purchase price be paid in fifteen equal annual installments, commencing with the fifth year following the date of the purchase, and ending with the twentieth year, which would coincide with the termination of the National Security Clause.

A summary of the cost of the transaction to Port of Tacoma, assuming for purposes of these figures a purchase price in the sum of \$1,000,000, but without intending in any way to recommend to you any sum which you could justify as the purchase price for the property, and without including anything for interest on your investment, or, to put it another way, upon the monies which you would borrow to make the investment, if you purchased for cash, may be summarized as follows:

(a) Purchase price	\$ 1,000,000.00
(b) For immediate inventory, preservation of items not preserved, providing heated storage for electrical measuring instruments, and for concentrating minor property in fewer than the 48 buildings now housing it	100,000.00

(c) For prompt replacing of fence in area south of 11th St. (Navy project of 1957)	15,000.00
(d) For maintenance over 10, 15 and 20 years under NSC of improvements and equipment Port cannot use or dispose of for those periods	644,120.00
(e) For interest @ 5% per year on cost of parcels of land which cannot be used for 15 and 20 years	197,500.00
(f) For maintenance of depth of water in way of areas Port cannot use	None Contemplat.
(g) For 10 year estimated operating deficit less 1st 10 year portion of (d)	<u>462,770.00</u>
	\$ 2,419,390.00

Arthur D. Ayrault

FEB 24 1959

Asst. Commissioner for Acq. & Disposal
Washington 25, D. C.

Chief, Acquisition & Disposal Division 10PRD
Seattle, Washington

Request Approval of Disposal Planning Report
U. S. Naval Industrial Reserve Shipyard
Tacoma, Washington
GSA Control No. N-Wash-595

Submitted herewith is the disposal planning report of the U. S. Naval Industrial Reserve Shipyard located in Tacoma, Washington, for your consideration. This is in accordance with instructions contained in Manual GS 6-4, paragraph 201.03.

Enclosure

Disposal planning report

AWMerrifield/emr/aah 2/20/59

10PRD

JB
Barnes

DISPOSAL PLANNING REPORT

U. S. Naval Industrial Reserve
Shipyard, Tacoma, Washington

Holding Agency No. 606
GSA Control No. N-Wash-595
Reported By: Department of the Navy
Washington 25, D. C.

February 18, 1959

PURPOSE:

This disposal plan sets forth the methods recommended for disposing of the U. S. Naval Industrial Reserve Shipyard located in the Northeast section of Tacoma, Washington.

RECOMMENDED DISPOSAL ACTIONS:

Disposal of the shipyard may be hampered to some degree by the restrictions imposed under the National Industrial Reserve Act of 1948 and the restrictions added by the Department of the Navy. (For more details concerning these restrictions see "Disposal Restrictions" of this report.) The Port of Tacoma has submitted an offer to purchase the shipyard on a negotiated sale basis. It is therefore recommended that full consideration be first given to the offer from that public body and in the event the offer is not considered satisfactory, then it is recommended the property be offered at sealed bid sale to be held May 28, 1959.

The chapel located on Parcel "A" is subject to a special disposal action. We have been informed that the Paine Air Force Base, Washington has initiated a request for the chapel. It is their intention to move the building by tug and barge from its present site to the Air Field.

(See attached map of shipyard for identification of Parcels.)

DESCRIPTION:

This Government surplus property located in the Northeast portion of Tacoma, Washington consists of five separate parcels of land totaling 182.71 acres, more or less. Subject property is a large complex shipbuilding and shiprepair facility.

Disposal Planning Report
N-Wash-595

IMPROVEMENTS: There are 133 buildings and structures including wharf, piers, operation, administrative and storage facilities plus water, electrical, sewer, steam and hot water, compressed air and heating systems. Hard surfaced streets connect all improvements with rail-road trackage connecting the important buildings. The majority of the improvements are in fair to good condition.

PERSONAL PROPERTY: There is a large inventory of tools and equipment that were used in shipbuilding and repair work. Included in this personal property are 22 large whirley cranes, one Diesel railroad engine, lathes, drills, welders plus hundreds of other machine and woodworking tools.

ENCUMBRANCES: In the attorney's opinion of title are listed several encumbrances. These include existing easements for utilities including sewer, water, power; easements for road rights-of-way; easements for railroad spur, freight and passenger tracks; and easement for a parking lot.

LOCATION & VICINITY: Subject property is located approximately 3 miles Northeast of the central business district of Tacoma, lying close to the intersection of East 11th St. and Alexander Avenue.

TAXES AND ASSESSMENTS: Assuming the property was in private ownership, the Pierce County Assessor reported the following estimated tax information:

1959 - Millage Rate 70.36

Assessed Value (as of 1955):

Land	-	\$215,559	(20% of appraised value)
Improvements-		367,294	(25% of appraised value)
Total		<u>\$583,853</u>	

Estimated Tax for Current Year:

Land	-	\$15,141
Improvements-		25,800
Total		<u>\$40,941</u>

There are no known taxes or assessments against the property.

Disposal Planning Report
Wash-595

ACQUISITION
COSTS:

The acquisition costs reported are as follows:

Improvements	-	\$10,596,229
Land	-	1,938,064
Personal Property (Est.)	-	<u>7,993,412</u>
		\$20,527,705

FAIR MARKET
VALUE:

The request for the fair market value has been submitted and the determination is due on or before February 13, 1959.

GENERAL
INFORMATION:

Holding Agency-Department of the Navy, Washington 25, D.C.

Reported Excess - September 25, 1958

Determined Surplus - November 19, 1959 ✓

CLASSIFICATION:

Because of the restrictions discussed below, and the nature of the facility the property is classified as (12) Industrial (Marine).

INTEREST IN
THE PROPERTY:

We have received inquiries from several large firms in the Pacific Northwest with one from New York and Alabama. The Port of Tacoma, as mentioned before, has made a study of the installation with the possibility of acquiring the property for leasing and renting to one or more clients.

ADVERTISING:

A thorough advertising program is being carried out in at least 4 nationally distributed trade magazines and in local newspapers, & the New York Journal of Commerce.

In addition to the ads, 1100 copies of each of the two announcements were distributed by mail to a specially prepared list of marine industrial manufacturers and ship building and repair companies.

Ads with the bid opening date designated are scheduled to appear in the same National publications in the near future, with copies of the ad to be mailed to the special list of marine industrial firms.

Disposal Planning Report
Wash-595

DISPOSAL
RESTRICTIONS:

This facility has been included in the National Industrial Reserve and is subject to the 20 year National Security Clause to permit the shipyard to be reactivated in the event of a national emergency. In addition, the Department of the Navy has made the ultimate sale of the property subject to the following:

1. Purchaser must be engaged in shipbuilding and ship repair work, otherwise the purchaser must be acceptable to the Department of the Navy.
2. Consideration will be given to the alternative methods of sale:
 - a. Sale of the entire facility as a unit.
 - b. Sale of Parcels "A" and "B" as one unit and "C" as a separate unit.
 - c. Sale of "A", "B" and "C" as separate units.

Enclosure

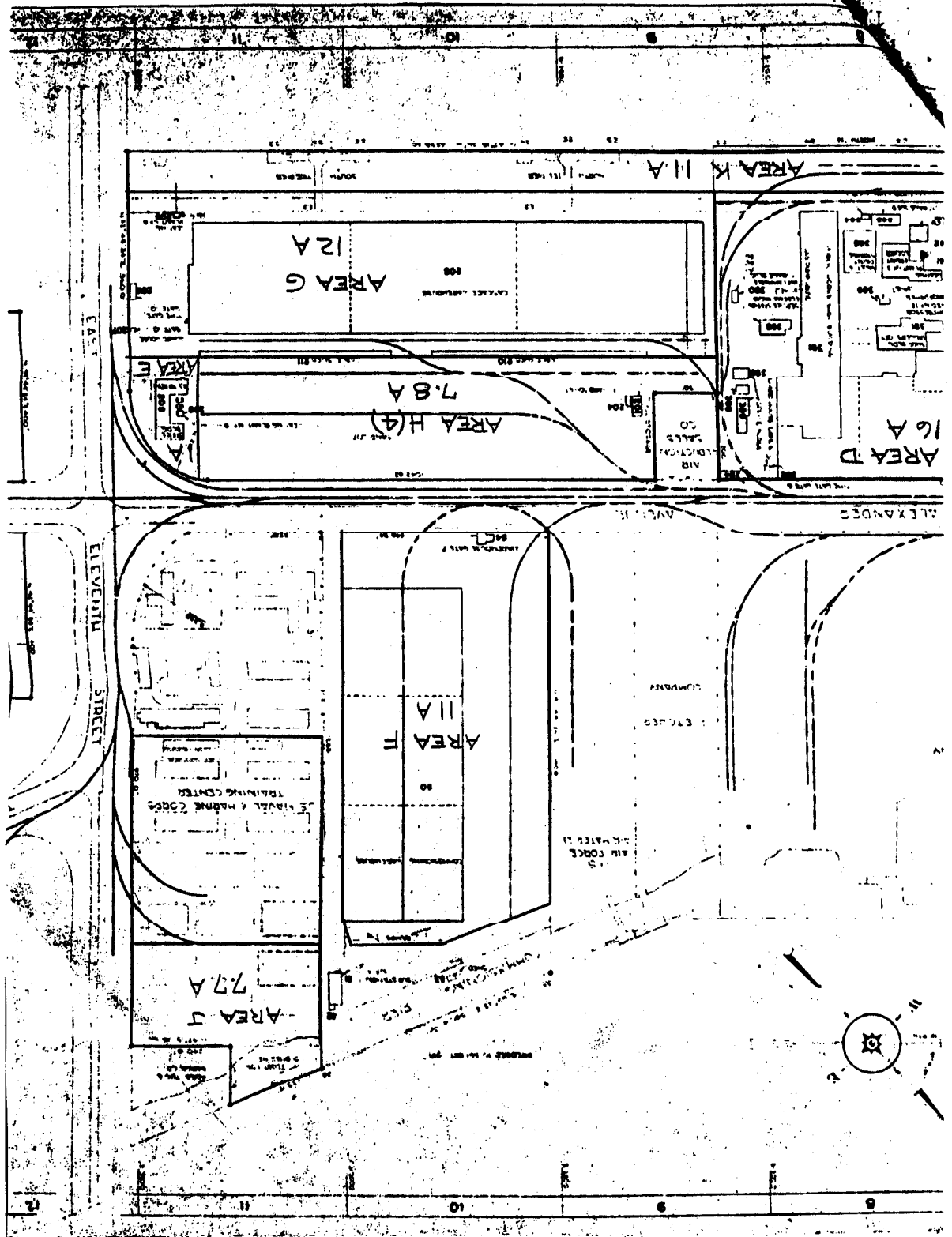
SUBMITTED BY:

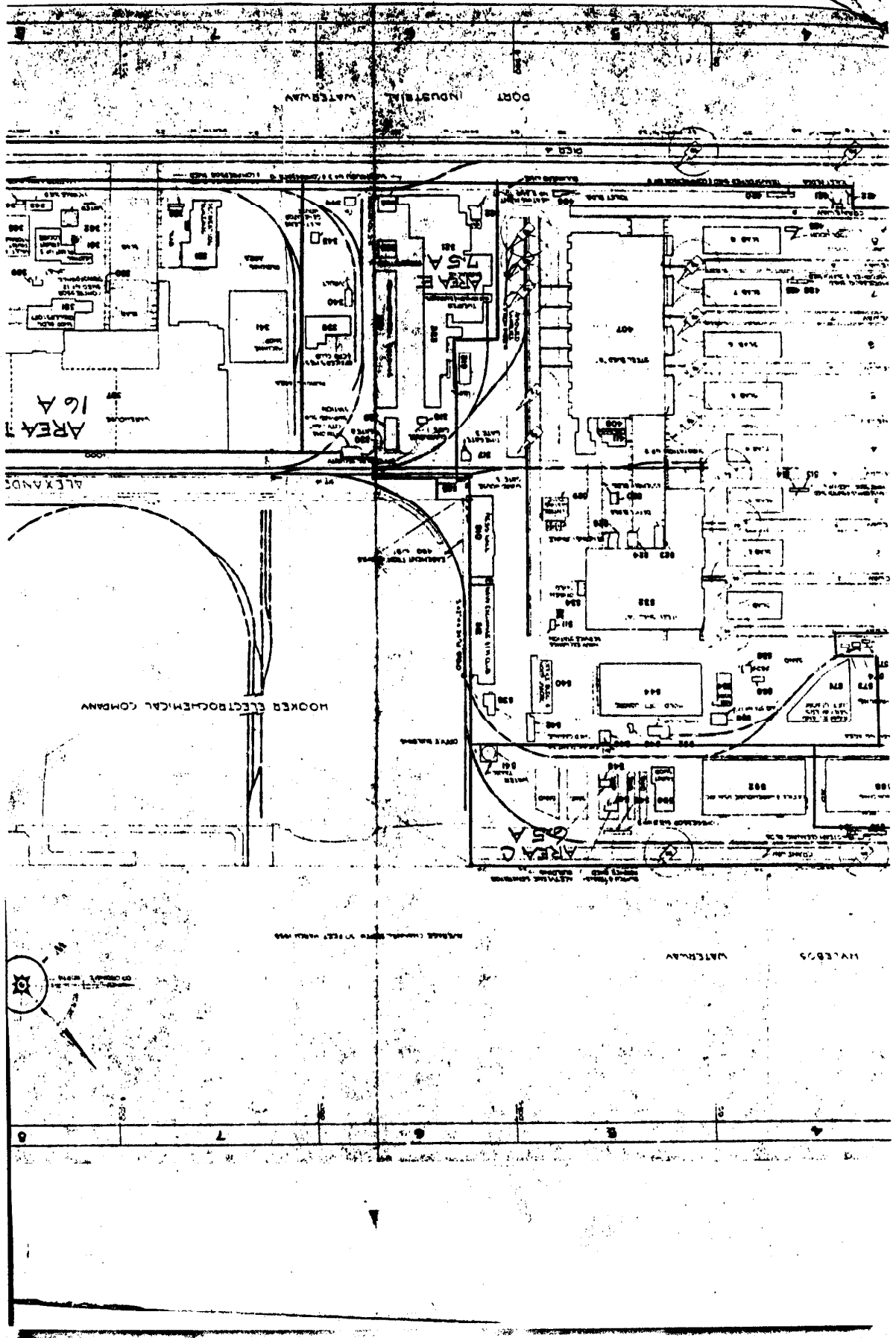
V. L. Barnes
V. L. BARNES,
Realty Officer

APPROVED BY:

C. E. OCAMB
C. E. OCAMB, Chief
Disposal Branch

2/18
BSD, Date





COPY

National Archives - Pacific NW Region
6125 Sand Point Way, NE
Seattle, WA 98115

Record Group NO. 121

Additional Information

*Public Building Service
Regional Office, Seattle (Regional 9)
Reel 9 Agency Regional Case Files
Box # 194; Folder: Study of Naval Industrial
Reserve Shipyards at Tacoma, Washington*

T. Naval Install

\$898,000 PIER JOB WILL START SOON

Tacoma Reporter
**Big Job OK
 For Tacoma
 Naval Base** ^{7/2/52}

A major reconstruction job amounting to \$898,000, to piers 1, 2 and 3 at the Tacoma Naval station in first-class shape, will get under way in the middle of the month, it was announced Tuesday by Capt. F. Agnew, commanding officer of the station. The work scheduled to be completed June 30, 1953.

The contract specifications call for new treated timbers, stringers, bents, rails and deck planks; additional new treated piling to replace damaged piling; a new mooring island; new transformer vaults; reinstallation of cleats, crane rails and railroad tracks; providing additional new cleats; providing trash booms; providing and rehabilitating additional mechanical and electrical services; rehabilitating existing mechanical and electrical equipment and performing other incidental work.

Successful bidder on the job is Manson Construction and Engineering Co. of Seattle. Contracts for the electrical and mechanical work will be sublet by the general contractor, Captain Agnew said.

The pier project is the largest of a number of jobs for which contracts have been let at the station. Captain Agnew announced last week that in an effort to alleviate the considerable unemployment which then prevailed in the Tacoma area he was arranging with the Navy to hurry proposed work.

ROUTING SLIP

13ND-705 (REV. 8-49)

PUBLIC WORKS OFFICE
 13TH NAVAL DISTRICT

DO NOT put correspondence on desk.
 detach Route Slip correspondence.
 change Routing Slip without notifying mail clerk.

DATE RECEIVED **7-21-50**

PWO FILE NO.

RECEIVED FROM CO NAVSTA TACOMA	DATE 17 July 1950
ADDRESSED TO BuShips via BuDocks	IDENT. NO., FILE NO. NS(18)70/JCE: njc A9-3(2) Ser 4804
SUBJECT Replace electrical feeders; request for authority and funds. (Encl (1) NavDocks 167-Est.for Spec.Proj"Replacement of damaged Elec.Dist. Feeders Zone 3" - New Project Checkoff list.	

<input type="checkbox"/> LETTER	<input type="checkbox"/> SPEEDLETTER	<input type="checkbox"/> DISPATCH	<input type="checkbox"/> CC - INFO ONLY						
Tel.	TO	OUT	CODE	DESTINATION	Tel.	TO	OUT	CODE	DESTINATION
339	5	2	D-10	Dist. Pub. Works Officer.....	405			DD-100	Coord., Special Programs.....
			D-11	Spec. Asst., Dist. P. W. Off.....	406			DD-200	Director, Fire Prot. Div.....
339	1		D-20	Asst. Dist. Pub. Works Off.....	406			DD-400	Dir., Utilities Proc. Div.....
237				Special Asst., NRTC.....	857			DD-500	Director, Sanitation Div.....
237			D-21	Radiological Officer.....	474			DD-700	Director, Automotive Div.....
237	2	2	DB-100	Coord., Design & Constr.....					
408			DB-300	Director, Design Division.....	350			DE-200	Dir., Property Admin. Div.....
					445			DE-220	Manager, Housing Branch.....
437			DB-400	Director, Constr. Division.....	444			DE-240	Manager, Surplus Prop. Br.....
368			DB-410	Manager, Contract Branch.....					
360			DB-420	Manager, Constr. & Insp. Br.....	269			DA-200	Director, Admin. Mgmt. Div.....
					872			DA-211	Manager, Civ. Pers. Branch.....
405	5		DC-100	Coord., Maint. & Operations.....	489			DA-220	Manager, Office Serv. Branch.....
406			DC-200	Director, Maint. Plan. Div.....	872			DA-230	Mgr., Prog. Control Rec. Br.....
406			DC-300	Director, Inspection Div.....	497			DA-240	Manager, Budget & Finance Br.....
406			DC-330	Manager, Field Branch.....					
					485			DA-221	Correspondence Files.....
630				Dist. CB Reserves Officer.....					

ACTION TAKEN BY (DATE)

REPLY DATE (ENTERED BY FILE CLERK)

COMMENTS OR ACTION TAKEN

DECLASSIFIED

EO 12958-2

Project NND 928003

By PEL NARA Date 5/10/95

TE SLIP
7-19-50

HEADQUARTERS
THIRTEENTH NAVAL DISTRICT

CONFIDENTIAL

TO: CO, NavSta, Tacoma

THEIR FILE OR SERIAL No. 8910170/PCS/mjc
SERIAL No. A9-3(2) Ser 4804
DATE 7-17-50

OUR FILE No. 17518
DATE REC'D
No. COPIES

SUBJECT: Replace electrical feeders; request for authority and funds, Enc (1) NavDocs
167 - Estimate for Special Project "Replacement of damaged Electrical Distribution Feeders"

TO	Recd	Recd	Recd	Recd	Recd	REMARKS	
Commandant.....						Zone 3. New Project Check-off List.	
Chief of Staff.....	1		19				
Staff Secy. & Aide.....							
Chief Clerk.....							
General Inspector.....							
Asst. for Naval Res.....							
Planning.....							
Asst. CofS Pers.....							
Distribution.....							
Civilian Personnel.....							
Training.....							
Welfare.....							
Discipline.....							
Fiscal BuPers Appns.....							
Chaplain.....							
Pass. Trans.....							
Asst. CofS Admin.....							
Legal.....							
Public Info.....							
Records.....							
Pubs. & Prints.....							
Asst. CofS Oper.....							
Intelligence.....							
Sec. & Fire Marshal.....							
Communications.....							
Dist. Marine Off.....							
District Operations.....							
Asst. CofS Logistics.....							
Budget.....							
Material.....							
Supply.....							
Acctg. NSD Seattle.....							
Regional Accts.....							
Navy Accts. Disb.....							
Public Works.....	2						
Ordnance.....							
Medical.....							
Dental.....							
A.I.M.....							
NWS, WSF.....							
Comdr. Naval Base.....							
Comdr. PSNS.....							
Comdr. NAB 13ND.....							
C.O., RecSta Seattle.....							
M.S.T.S.....							
Commandant's Files.....							
ACTION						2	Reply required by:
X Indicates that copy should be furnished • Indicates that copy has been furnished (C) Your copy Numerals indicate order of routing Numeral in "action" box indicates action officer							

CONFIDENTIAL

DECLASSIFIED
E.O. 12958 Sec. 3.2
Project: NAH 9280.03
By: PEL NARA Date 5/6/95

IN REPLY PLEASE
REFER TO:
FILE NO.:

SERIAL
NS(18)70/JCE:mjc
A9-3(2)
Ser 4804

U. S. NAVAL STATION
PUBLIC WORKS DEPARTMENT
TACOMA 2, WASHINGTON

JUL 19 8 57 AM '50
13TH NAVAL DISTRICT
CONFIDENTIAL FILES
17 July 1950

~~AIR MAIL-CONFIDENTIAL~~

From: Commanding Officer, U. S. Naval Station, Tacoma 2, Washington
To: Chief, Bureau of Ships, Navy Department, Washington 25, D. C.
Via: Chief, Bureau of Yards and Docks

Subj: Replace electrical feeders; request for authority and funds

Ref: (a) CO, NavStaTac ltr to BuDocks NS(18)/A9-3(4) ser 703897
JCE:lit of 27 May 1949
(b) BuDocks airmail ltr NS20/11-2/c-211C of 6 Dec 1949 to *VS/Tacoma*
CO, NavStaTac
(c) BuDocks allotment authorization of 6 Jun 1950 to CO,
NavStaTac
(d) BuShips ltr NS(21)(743)/11-1-(51)/ser 743-662 of 7 Jul *1950*
1950 to CO, NavStaTac

Encl: (1) NavDocks 167 - Estimate for Special Project "Replacement
of damaged Electrical Distribution Feeders Zone 3"

1. Reference (a) transmitted an estimate for a special project "replacement of damaged electrical distribution feeders in Zone 3" as project 9-50 on NavDocks form 167.

2. Reference (b) authorized subject project and provided funds in the amount of \$5,000 as the first increment.

3. Reference (c) allotted an additional \$2,012 for this project, reducing the remaining funds required to complete the work to \$42,158.

4. Paragraph #11 of reference (d) states that funds to cover special non-recurring maintenance would be provided in the form of an allotment in addition to and separate from the station's maintenance and operation allotment, and that it would be granted upon review and approval by the Bureau of special projects submitted by this activity.

5. Forwarded herewith as enclosure (1) is subject project which is resubmitted as priority #1 for this activity. This project is extremely vital at this time and is considered of an urgent nature. Failure during present reactivation activity of the feeder system would sever power to all Public Works shops and reactivation of ships would be practically at a standstill.

~~CONFIDENTIAL~~

DECLASSIFIED	
FOI 12150	Rev. 3.3
Project: WMA 9280.03	
By: PCL	NARA Date: 5/6/95

NS(18)70/JCK:mje
A9-3(2)
Ser 4804
17 July 1950

AIR MAIL ~~CONFIDENTIAL~~

6. It is requested that priority action be given this project, that funds in the amount of \$42,158 be provided, and authority be given to accomplish by NOy contract.

T. H. KOBAY

Copy to:

Com 13 ←

~~CONFIDENTIAL~~

NAVDOKS Form 167

ESTIMATE FOR SPECIAL ALLOTMENT

APPROPRIATION: MAINTENANCE, BUREAU OF YARDS AND DOCKS

Order of importance: No. 9
Place and date: 1 June 1949
Project No. U.S. Naval Station, Tacoma, Wash.
Purpose: Replacement of damaged electrical distribution feeders in Zone 3
Project No. 9-50

Total estimated cost: \$ 49,170.00
Funds requested now: Amount, \$ 49,170.00
Project Check-off List (Attached)
NS drwg No. 336 Replacement of Electrical Feeders Zone No. 3 (Attached)

Description of project and comment, including statement of degree of urgency and necessity:

1. A failure of the primary power feeders from Substation No. 3 to Bldg. No. 341 occurred on 28 January 1949 and a failure of the secondary single phase service to Bldg. No. 391 occurred on 3 April 1949. The latter caused a failure of all the primary feeders in the area. Temporary repairs have been made and services restored.
2. Both failures occurred when demands were at a minimum and were caused by water finding its way under the lead sheathing of conductors and penetrating the insulation. This was possible because the conductors are not properly protected by conduit. Other protective equipment and measures such as potheads, primary cut-out fuses, conductor racks and proper splicing in manholes were not provided during original construction. The conductors that have been rendered unsafe are eleven of twelve primary conductors in the tunnel in Zone 3, three primary feeders in Bldg. No. 341, and five secondary conductors to Bldg. 391 from the transformer bank on Bldg. 365. Visual inspection of the conductors discloses holes of varying sizes in the lead-sheaths. The damaged electrical feeders serve the buildings and shops in Zone No. 3.
3. This project proposes the renewal of the existing cables, which provide capacity for shipbuilding, repair and reactivation operations at a cost of \$49,170 and involves the following work:

(Continue on another sheet if necessary)
(Space reserved for Bureau Memoranda)

16-40514-1 U. S. GOVERNMENT PRINTING OFFICE

Project Manager _____

ENCLOSURE (1)

NAVDOKS Form 167

ESTIMATE FOR SPECIAL ALLOTMENT

APPROPRIATION: MAINTENANCE, BUREAU OF YARDS AND DOCKS

Order of importance: No. 9 Place and date: U.S. Naval Station, Tacoma, Wash.
Project No. 1 June 1949
Purpose: Replacement of damaged electrical distribution feeders in Zone 3
Project No. 9-50 contd.

(1)

Total estimated cost: \$ 49,170.00 Project Check-off List (Attached)
Funds requested now: Amount, \$ 49,170.00 NS drwg No. 336 Replacement of Electrical
Feeders Zone No. 3 (Attached)

Description of project and comment, including statement of degree of urgency and necessity:

- (1) Replace seventeen 350 MCM, 3 kv, VCL, single conductor primary feeders from Substation No. 3 to transformers and transformer banks, potheads, and cable racks to properly protect these conductors, as shown on attached NS drwg No. 336.
 - (2) Move transformers from roof of Bldg. No. 365 to new location adjacent to new manhole No. 23.
 - (3) Run new underground secondary services in conduit, with concrete envelope, from new location of transformers to distribution center of Bldg. 391. A detailed breakdown of the estimated cost of this work is attached.
4. To provide capacity for only the present peacetime status of the station, the damaged 350 MCM conductors could be replaced with No. 1/0 conductors at an estimated cost of \$21,600. This method is not recommended since it does not preserve the station as a Class "B" Shipyard, in that the basic construction capacity of the station will not be maintained substantially intact and readily available for speedy resumption of shipbuilding.
5. The work proposed under this project will be accomplished by NOy contract.

(Continue on another sheet if necessary)
(Space reserved for Bureau Memoranda)

16-40514-1 U. S. GOVERNMENT PRINTING OFFICE

Project Manager

ENCLOSURE (1)

U. S. NAVAL STATION
TACOMA 2, WASHINGTON

New Project Check-off List

Project: Replacement of damaged electrical distribution feeders in
Zone No. 3

I. For predetermination of wages:

State	- Washington
County	- Pierce
Nearest City	- Tacoma

II. For certification to CNO

1. Scope of work:

- a. The purpose of this project is to replace damaged conductors of the primary (2,400 v) feeders, and secondary services (120/240 v single phase and 440 v - 3 phase) of the distribution system of this station in the area shown on attached NS Drwg No. 336. The recommended design is based on providing adequate electrical capacities for a "Class B" shipbuilding yard as established by BuShips and to remove potential hazards by complying with standards of BuDocks Specification 9Yf "Electrical Apparatus, Distribution Systems, and Wiring".
- b. To accomplish this, the following construction is necessary:
 - (1) Replace seventeen 350 MCM, # kv, VCL, single conductor primary feeders from substation No. 3 to transformers and transformer banks to include installation of manholes, ducts with concrete envelope, pothead, primary cutouts and cable racks to properly protect these conductors.
 - (2) Move transformers from roof of Bldg. No. 365 to new location adjacent to new manhole No. 23.
 - (3) Run new underground secondary services in conduit with concrete envelope from new location of transformers to distribution center of Bldg. No. 391 requiring three sets of three 350 MCM, 600 v, VCL, single conductors, in parallel, for the single phase, three wire, lighting service, and three sets of three 350 MCM single conductors, in parallel, for the three phase, three wire power service. The conductors are to be installed in six 3" conduits.

**Project: Replacement of damaged electrical distribution feeders
in Zone No. 3 contd.**

c. Estimate of cost:

(1) 19,000 ft., 350 MCM, 5 kv, VCL, single conductor	\$19,000
(2) Three standard manholes	1,500
(3) Cable racks, insulators & Pulling irons	300
(4) Potheads and primary cutouts	590
(5) 4,750 ft 3 inch duct	2,100
(6) Trench & concrete envelope for ducts	950
(7) Move transformers from roof of Bldg. No. 365	1,300
(8) 2,000 ft 350 MCM, 600 v., VCL single conductor	1,500
(9) Electrical labor	10,000

Estimate of Labor and Material \$37,240

Plus 20% overhead and profit 7,460

\$44,700

Plus 10% contingencies 4,470

\$49,170

III. For approval of location.

The proposed construction will be located on Government-owned property at the U.S. Naval Station, Tacoma, Washington.

IV. Method of accomplishment:

By NOy contract.

COPY

National Archives - Pacific NW Region
6125 Sand Point Way, NE
Seattle, WA 98115

Record Group NO. 181

Additional Information Records of Naval District +
Shore Establishment.

Archives Box # 60 A - 490 Box 1

Fdr: NS/Tacoma - Naval Station
Tacoma, Washington (1)

ROUTING SLIP

19ND-701 (REV. 9-49)

PUBLIC WORKS OFFICE
13TH AERIAL DISTRICT

put correspondence in desk
detach Route Slip if correspondence.
change Routing Slip without notifying mail clerk.

DATE RECEIVED 8-16-50 1050

PWO FILE NO. NS(18)

RECEIVED FROM

BUSHIPS

DATE

10 Aug 1950

ADDRESSED TO

CO NAVSTA TACOMA

IDENT. NO., FILE NO. C-NS(21)(771)

Ser 770-0149

SUBJECT

Electrical feeders; request for authority and funds for replacement of.

<input type="checkbox"/> LETTER				<input type="checkbox"/> SPEEDLETTER				<input type="checkbox"/> DISPATCH				<input type="checkbox"/> CC - INFO ONLY			
TEL.	TO	OUT	CODE	DESTINATION				TEL.	TO	OUT	CODE	DESTINATION			
339	2		D-10	Dist. Pub. Works Officer				405			DD-100	Coord., Special Programs			
			D-11	Spec. Asst., Dist. P. W. Off.				406			DD-200	Director, Fire Prot. Div.			
330	1	HE	D-20	Asst. Dist. Pub. Works Off.				406	5	PA	DD-400	Dir., Utilities Proc. Div.			
237				Special Asst., NRTC				857			DD-500	Director, Sanitation Div.			
237			D-21	Radiological Officer				474			DD-700	Director, Automotive Div.			
237	A	3	DB-100	Coord., Design & Constr.											
408		W	DB-300	Director, Design Division				350			DE-200	Dir., Property Admin. Div.			
								445			DE-220	Manager, Housing Branch			
437			DB-400	Director, Constr. Division				444			DE-240	Manager, Surplus Prop. Br.			
368			DB-410	Manager, Contract Branch											
360			DB-420	Manager, Constr. & Insp. Br.				269			DA-200	Director, Admin. Mgmt. Div.			
								872			DA-211	Manager, Civ. Pers. Branch			
405	4		DC-100	Coord., Maint. & Operations				489			DA-220	Manager, Office Serv. Branch			
406			DC-200	Director, Maint. Plan. Div.				872			DA-230	Mgr., Prog. Control Rec. Br.			
406			DC-300	Director, Inspection Div.				497	6	PA	DA-240	Manager, Budget & Finance Br.			
406			DC-330	Manager, Field Branch											
								485			DA-221	Correspondence Files			
630				Dist. CB Reserves Officer											

ACTION TAKEN BY (DATE)

REPLY DATE (ENTERED BY FILE CLERK)

COMMENTS OR ACTION TAKEN

*Information for
Field Investigation on 8/17/50*

ROUTE SLIP
13ND-1979

HEADQUARTERS
THIRTEENTH NAVAL DISTRICT

CONFIDENTIAL

FROM BuShips
TO 00, NavStaTacoma

THEIR FILE OR C-NS(21)(771)
SERIAL No. 770-0149
DATE 8-10-50

OUR FILE No. 17518
DATE REC'D 8-11-50
No. COPIES

SUBJECT Electrical feeders; request for authority and funds for replacement of.

TO	Rec'd	Rec'd	Rec'd	Rec'd	1-1	REMARKS
Commandant.....						
Chief of Staff.....	1		15			
Staff Secy. & Aide.....						
Chief Clerk.....						
General Inspector.....						
Asst. for Naval Res.....						
Planning.....						
Asst. CofS Pers.....						
Distribution.....						
Civilian Personnel.....						
Training.....						
Welfare.....						
Discipline.....						
Fiscal BuPers Appns.....						
Chaplain.....						
Pass. Trans.....						
Asst. CofS Admin.....						
Legal.....						
Public Info.....						
Records.....						
Pub. & Prints.....						
Asst. CofS Oper.....						
Intelligence.....						
Sec. & Fire Marshal.....						
Communications.....						
Dist. Marine Off.....						
District Operations.....						
Asst. CofS Logistics.....						
Budget.....						
Material.....						
Supply.....						
Acctg. NSD Seattle.....						
Regional Accts.....						
Navy Accts. Disb.....						
Public Works.....	2	14			4	
Ordnance.....						
Medical.....						
Dental.....						
A.I.M.....						
NWS, WSF.....						
Comdr. Naval Base.....						
Comdr. PSNS.....						
Comdr. NAB 13ND.....						
C.O., RecSta Seattle.....						
M.S.T.S.....						
Commandant's Files.....						

CONFIDENTIAL

ACTION 2 Reply required by:

- x Indicates that copy should be furnished
- Indicates that copy has been furnished
- ⊙ Your copy
- Numerals indicate order of routing
- Numerals in "action" box indicates action officer



DEPARTMENT OF THE NAVY
BUREAU OF SHIPS
WASHINGTON 25, D. C.

DECLASSIFIED
E.O. 12150, Rev. 12
Project: NAB 728003
By: BEL HARA Date: 5/10/95

IN REPLY REFER TO

C-WB(21)(771)
Ser 770-0149

~~CONFIDENTIAL~~

10 AUG 1950

From: Chief, Bureau of Ships
To: Commanding Officer, U. S. Naval Station, Tacoma
Subj: Electrical feeders; request for authority and funds for replacement of

Ref: (a) CO, NavSta, Tacoma conf ltr WS(18)70/JCK:mjc over A9-3(2) over Ser 4804 of 17 July 1950 to BuShips via BuDocks
(b) BuShips ltr NN/L1-1(771) over L1-1-(51) over FN28/A2-11 over Ser 770-710 of 26 June 1950 to Distribution List

1. Funds in the amount of \$42,158 and authority to proceed with the subject replacement were requested by reference (a), using an Noy Contract. NAVDOCKS Form 167, submitted with reference (a), showed an original estimated cost of \$49,170 to correct faults in the distribution system of the Station where failures have occurred or may be expected to occur unless remedied. The proposal of reference (a), as outlined in NAVDOCKS Form 167 enclosed therewith, was to renew the electrical feeder cables and make minor rearrangements as follows:

a. To replace seventeen 350,000 CM, 3 kv, VCL, single conductor primary feeders from Substation 3 to transformers and transformer banks, potheads, and cable racks.

b. To run new underground secondary services in conduit, with concrete envelope, from the new location of transformers to the distribution center of Building No. 391.

c. To move transformers from roof of Building No. 365 to a new location adjacent to new manhole No. 23.

2. It was further pointed out in the Form 167 of reference (a) that the present peacetime status of the Station could be maintained satisfactorily by using No. 1/10 conductors, instead of the 350,000 CM conductors, at an estimated lesser cost of \$21,600.

3. By first endorsement on reference (a), it was stated that the subject project is essential to provide for the present

~~CONFIDENTIAL~~

DECLASSIFIED
E.O. 12958 Sec. 3.3
Project: MMO 9280.03
By: PEL NAVA Date: 5/10/95

~~CONFIDENTIAL~~

C-NE(21)(771)
Ser 770-0149

peacetime mission of the Station as a Reserve Fleet Berthing Area and to preserve the Station as a Class "B" shipyard and it was recommended by the Bureau of Yards and Docks that cable of sufficient size be installed to supply the electrical loads which would be required in support of a shipbuilding program. It was noted in the first endorsement on reference (a) that the Bureau of Yards and Docks had provided \$7,012 of the \$49,170 total required during fiscal year 1950.

4. It is noted that the order of importance stated on NAVDOCKS Form 167 of 1 June 1949 was ninth on the list of this type of expenditure request. By reference (a), however, it was requested that priority action be given the subject project.

5. Allotment No. 12001/51 is being established in the amount of \$42,158 to provide funds for accomplishment of the subject, nonrecurring maintenance project by WY Contract. It does not appear advantageous to run the feeder lines in sizes sufficient only for present needs since these would then have to be removed and replaced by the heavier lines at the time the Shipyard was activated for shipbuilding.

N. Sonenshein
By Direction

Copy to:
ADEN (1)
NAVDOCKS C-211C (1)
COMTHIRTEEN (1)

~~CONFIDENTIAL~~

Reproduced at the National Archives-Pacific NW Region

DECLASSIFIED
E.O. 12958, Sec. 1.3
Project: WAB 728003
By: FE L DATE: 5/6/96

ROUTING SLIP
128-708 (LPO 4-4)PUBLIC WORKS
13TH NAVAL F

put correspondence in desk.

Detach Route Slip from correspondence.

Change Routing Slip without notifying mail clerk.

DATE RECEIVED 10-26-50

PWO FILE NO. NS(18)

RECEIVED FROM

ComTacGrp, PacResFlt

DATE

23 Oct 1950

ADDRESSED TO

BuShips via Coml3, BuDocks

IDENT. NO., FILE NO. FF19(TacGrp)
(01/1r)N26 Ser 038

SUBJECT End-1 fwd CO NS Tac Ser 014 of 10-16-50 re: Additional 440 volt A.C. power at U.S. Naval Station, Tacoma, Wash; request for authority & funds for necessary construction (w/encl (1) thru (4))

<input type="checkbox"/> LETTER				<input type="checkbox"/> SPEED LETTER				<input type="checkbox"/> DISPATCH				<input type="checkbox"/> CC - INFO ONLY			
Tel.	TO	CODE	DESTINATION	Tel.	TO	OUT	CODE	DESTINATION	Tel.	TO	OUT	CODE	DESTINATION		
339	✓	D-10	Dist. Pub. Works Officer.....	405			DD-100	Coord., Special Programs.....							
		D-11	Spec. Asst., Dist. P. W. Off.....	406			DD-200	Director, Fire Prot. Div.....							
339	✓	D-20	Asst. Dist. Pub. Works Off.....	406	✓	PM	DD-400	Dir., Utilities Proc. Div.....							
237			Special Asst., NRTC.....	857			DD-500	Director, Sanitation Div.....							
237		D-21	Radiological Officer.....	474			DD-700	Director, Automotive Div.....							
✓ 237	✓	DB-100	Coord., Design & Constr.....												
408	✓	DB-300	Director, Design Division.....	350			DE-200	Dir., Property Admin. Div.....							
				445			DE-220	Manager, Housing Branch.....							
437		DB-400	Director, Constr. Division.....	444			DE-240	Manager, Surplus Prop. Br.....							
368		DB-410	Manager, Contract Branch.....												
360		DB-420	Manager, Constr. & Insp. Br.....	269			DA-200	Director, Admin. Mgmt. Div.....							
				872			DA-211	Manager, Civ. Pers. Branch.....							
405		DC-100	Coord., Maint. & Operations.....	489			DA-220	Manager, Office Serv. Branch.....							
406		DC-200	Director, Maint. Plan. Div.....	872			DA-230	Mgr., Prog. Control Rec. Br.....							
406		DC-300	Director, Inspection Div.....	497			DA-240	Manager, Budget & Finance Br.....							
406		DC-330	Manager, Field Branch.....												
				485			DA-221	Correspondence Files.....							
630			Dist. CB Reserves Officer.....												

ACTION TAKEN BY (DATE)

DB-300 - 11/3

REPLY DATE (ENTERED BY FILE CLERK)

COMMENTS OR ACTION TAKEN

For remarks see attach. of sheet
- J.V.F. 2/11/50

LIP
(V. 8-50)

HEADQUARTERS
THIRTEENTH NAVAL DIST T

CONFIDENTIAL

DATE RECD. 10-25-50

COMMANDANT'S FILE NO. NS 18

FROM Commander Tacoma Group, PacResFlt	DATE 23 Oct 1950
TO Chief, BuShips, Via: (1) Coml3 (2) Chief	THEIR SERIAL OR FILE NO. Ser 038

SUBJECT
End-1 fwd CO NavSta Tacoma Ser 014 dtd 10-16-50 re: Additional 440 volt A.C. power on Pier 4 at U.S. Naval Station, Tacoma, Wash.; request for authority and funds for necessary construction. W/encl (1) Copy of General Electric Co. letter of 28 Sep 1950 (2) Project Check Off List (Using Cable on NO. COPIES 4 Hand) (3) Naval Station, Tacoma drawing NS 443 (4) Project Check Off List

☐ LETTER ☐ SPEED LETTER ☐ PUBLICATIONS ☐ CC - INFO ONLY

Code	Route	Initial & Date	DESTINATION	Tel. No.	Code	Route	Initial & Date	DESTINATION	Tel. No.
00			Commandant	230	03	4		Asst. CofS Operations	650
001	2	AM	Chief of Staff	663	31			District Operations	562
002	1	7L	Staff Secy. & Aide	668	32			Intelligence	709
002A			Chief Clerk	591	33			Sec. & Fire Marshal	384
003			Asst. for Naval Reserve	308	34			Communications	225
004			Planning	498	36			District Marine Officer	271PSNS
005			Inspector General, 13ND	739	04			Asst. CofS Logistics	636
01			Asst. CofS Personnel	311	41			Budget	361
11			Distribution	338	41			Material	636
12			Civilian Personnel	352	43			Supply	221
13			Training	276				Acctg. NSD Seattle	613
14			Fiscal (BuPers Appns.)	573	43A			Navy Accts. Disb.	340
15			Welfare	575	43B			Regional Accounts	241
16			Discipline	739	44			District Civil Engineer	339
18			Chaplain	258	45			Ordinance	636
11E			Pass. Trans.	262	46			Medical	454
02			Asst. CofS Admin.	663	47			Dental	596
22			Legal	217	70	3		Public Works Officer	339
23			Public Information	243	60			A.I.M.	600
25			Records	829				NWS, WSF	230
26			Pubs. & Prints.	790PSNS				Comdr., Naval Base	401PSNS
								Comdr., PSNS	406PSNS
					37			Comdr., NAB, 13ND	348
								(Aviation Matters Ofc. on Comdt's Staff.)	
								C.O., RecSta, Seattle	300
								M.S.T.S., NorPac	203
								Commandant's Files	795

ACTION 3

x Indicates that copy should be furnished.
* Indicates that copy has been furnished.
⊙ Your copy.

Reply Required by:
Numerals indicate order of routing.
Numerals in "Action" box indicates action officer.

CONFIDENTIAL

DECLASSIFIED
E.O. 12150 Sec. 3.3
Project: NND 728003
By: PCL NARA Date 5/6/95

In Reply
Refer to
FF19(TacGrp)(01/1r)
N26
Serial: 038

23 October 1950

~~CONFIDENTIAL~~

FIRST ENDORSEMENT on CO, NavSta, Tacoma, Wn. ltr NS(18)70/HOS:fac
N26 Ser 014 of 16 Oct 1950

From: Commander Tacoma Group, Pacific Reserve Fleet
To: Chief, Bureau of Ships
Via: (1) Commandant, Thirteenth Naval District
(2) Chief, Bureau of Yards and Docks

Subj: Additional 440 volt A.C. power on Pier 4 at U. S. Naval Station,
Tacoma, Washington; request for authority and funds for necessary
construction

1. Forwarded,
2. The installation of additional A.C. power at Berths K, L, and M
and additional D.C. power at Berths B, D, F, G, and H will be suffi-
cient for the needs of this group,

H. B. BUTTERFIELD

Copy to:
NavSta, Tacoma

~~CONFIDENTIAL~~

In reply please
refer to:

NS(18)70/HOS:fas
NAG
Ser 014

U. S. NAVAL STATION
TACOMA, 2. WASHINGTON

OGI 1 G 1950

~~CONFIDENTIAL~~

From: Commanding Officer, U.S. Naval Station, Tacoma, Washington
To: Chief, Bureau of Ships
Via: (1) Commander, Tacoma Group, Pacific Reserve Fleet
(2) Commandant, Thirteenth Naval District
(3) Chief, Bureau of Yards and Docks

Subj: Additional 440 volt A.C. power on Pier 4 at U.S. Naval Station, Tacoma, Washington; request for authority and funds for necessary construction

Encl. (1) Copy of General Electric Company letter of 28 Sep 1950
(2) Project Check Off List (Using Cable on Hand)
(3) Naval Station, Tacoma drawing NS 443
(4) Project Check Off List (Using New Cable)

1. It is requested that authority be granted and funds in the amount of \$9,000 be made available for the installation of additional 440 volt A.C. power to Pier 4 to supply 1,000 amperes to Berths K, L, and M, as shown on enclosure (3). This project was recommended by Rear Admiral G.C. Klein during an inspection of the station on 21 August 1950 for use in connection with the activation of vessels berthed at this activity.

2. The 440 volt 3 phase power used for ship construction on the piers by Todd Shipyard, Inc, was removed in 1946 during the construction of the concrete mooring islands under contract NOy-13606. Under contract NOy-13607 a minimum amount of power was provided for the use of the inactive ships berthed at the piers. This contract supplied 440 volt 3 phase power at all piers by using #2/0 VL cable in 2" conduit from Substations 3 and 5 to 200 ampere shore boxes at each berth. Two (2) boxes are connected on each feeder which results in an actual capacity of 92 amps per berth which is a minimum for inactivated ships.

3. In order to provide temporary power in the event of activation of ships this activity in 1946 procured, through surplus channels, 8800 ft of 2000 mm VL RMJ bronze cable. The cable was to be laid on the top of the piers. This project proposes to permanently install the cable below the deck of the pier. Since the cable is shipboard cable information was requested from the General Electric Company (enclosure (1)) as to

~~CONFIDENTIAL~~

DECLASSIFIED
E.O. 12456 Sec. 3.3
Project: NARA 9280.03
By: PEL NARA Date 5/16/95

~~CONFIDENTIAL~~

NS(18)70/HOS:fac

N26

Ser 014

OCT 16 1950

the suitability of the cable for the intended installation. The Company does not recommend the cable for use in wet locations. Unless Bureau experience indicates that the cable can be used for the work proposed herein, new cable will have to be procured which will increase the cost of the project \$37,000.00.

4. It is proposed to increase the 440 volt A.C. power on Pier 4 by installing the aforementioned cable from 1,000 ampere breakers to be located in Substation 3 to new 1,000 ampere ship to shore boxes located at Berths K, L, and M as shown on enclosure (3).

5. The station is now working on a project using maintenance funds which will supply 1,000 amperes of D.C. power to Piers 1, 2, and 3. Existing 500 mm RL armored cable is being utilized in this work. The 500 mm armored cable was installed under contract NOy-13491 and was used for temporary 120/240 volt D.C. service during the construction of the concrete mooring islands under contract NOy-13606. By accomplishing the project proposed herein A.C. ships will be activated at Pier 4 and D.C. ships at Piers 1, 2 and 3.

6. It is recommended that the proposed work be accomplished by NOy contract. Enclosure (2) is the New Project Check Off List and enclosure (3) is a plan giving the location and details of the work. Enclosure (4) contains a separate breakdown of cost totaling \$46,000 which is the estimated funds required to accomplish the work if the 2,000 mm cable on hand cannot be used.

7. If this project is not approved, A.C. power to activate ships in an emergency at this station will be supplied by using the 2,000 mm cables on hand, run temporarily on the deck of the piers. This is the only method the Station has of supplying A.C. power in an emergency.

8. The proposed work will be on government property and is essential to the mission of the Naval Station, Tacoma to provide required power for the activation of ships. Existing facilities are inadequate for furnishing the necessary power. This project is submitted in accordance with SecNav ltr of 3 Feb 1947 (NFB) ser 771/610/CP:1hp, SecNav ltr 156/M610/CP:1hp of 14 Oct 1947 and Bureau of Ships letter NS/L1-1-(51) NS23/A2-11 ser 770-710 of 26 June 1950.

C. A. BERRY

~~CONFIDENTIAL~~

**GENERAL ELECTRIC COMPANY
CONSTRUCTION MATERIALS DEPARTMENT
Schenectady, N.Y.**

September 28, 1950

VIA AIR MAIL

Re: NS(18)70/HRD:fsc
N26-5
Ser 4925

A.C. Morris
CDR., USN
Public Works Officer
U.S. Naval Station
Tacoma 2, Washington

Dear Sir:

Please refer to your inquiry of September 13, 1950, pertaining to Req. No. KNOB - 15637. This cable was first designed in 1921 for A.C. propulsion cables for battleships and battle cruisers prior to the building of U.S.S. West Virginia, Maryland, and California. This cable was supplied to the Navy in 1942.

The Navy had worked out current ratings from tests they ran for the particular conditions they had in ship propulsion. We do not have this information, so must make our recommendations on the basis of industry standards, calculations, and past experience.

This single-conductor cable has two 2 in. x 1/32 in. commercial bronze tapes. Obviously, the sheath resistance is quite low. If you were to operate this cable short-circuited sheath the current induced in the sheath by the conductor current may be very high and result in excessive heating of the sheath. The exact resistance of the sheath could be determined only from test data. We can predict that the current rating of the cable will probably be seriously lowered unless the cable is operated open circuited sheath, i.e. the cable sheath may be grounded at only one point. Since only a cable tape and a layer of paint is over the armor, special precautions will be necessary to insulate the sheath from ground.

This cable is now eight years old. Natural rubber tends to crack with age due to the attack of oxygen on the molecular structure. This cable may or may not have been stored under severe weather conditions. We feel that we should not recommend this cable for use in wet locations. If there is any moisture present at all the ends should be sealed so that no moisture can enter. The rope core can act as an excellent wick to carry water into the cable. It is hoped that the ends were sealed if the cable was stored in damp locations.

COPY

Enclosure (1)

DECLASSIFIED	
E.O. 12958	3-1 3.3
Project:	MMB 9280.03
By:	PEL HARA Date: 5/10/85

GENERAL ELECTRIC

A.C. Morris

9 - 28 - 50

We would recommend that this cable be operated at a voltage under 5000 volts. We have chosen for our installation conditions the following:

- Cables in air, 40°C ambient temperature.
- 85°C maximum copper temperature.
- 5000 V. maximum operating voltage (phase to phase, grounded neutral).
- 6 in. minimum center to center spacing of adjacent cables.

1. Three cables mounted horizontally in air
 $I_{max.} = 1407$ amperes
2. Three cables mounted vertically in air
 $I_{max.} = 1293$ amperes

It is hoped that these current ratings may be of use to you. If your proposed installation conditions differ from these, we will gladly furnish current capacities based on your conditions. Remember, the above current ratings are based on operating open circuited sheath.

Very truly yours,

s/ John T. Jamison
 John T. Jamison

Commercial Engineering
 Electric Utilities
 Wire & Cable Division

JTJ:G

COPY

DECLASSIFIED
E.O. 12356 Sec. 3.3
Project: NNA 9280.03
By: PEL NARA Date 5/10/95

**U.S. NAVAL STATION
TACOMA, WASHINGTON**

NEW PROJECT CHECK-OFF LIST

Project: Provide additional A.C. 440 volt, three phase power on Pier 4

I. For predetermination of wages:

State - Washington
County - Pierce
Nearest City - Tacoma

II. Scope of work:

- (a) Run approximately 5000 lineal feet of 2000 mm, VL, RLJ Bronze cable now on hand, under Pier 4
- (b) Install 3 - 1000 amp breakers in Substation No. 3
- (c) Install 3 - 1000 amp ship to shore boxes in Berths "L", "M" and "N" Pier 4

2. Estimate of cost:

	<u>Mat'l</u>	<u>Labor</u>	<u>Total</u>
(a) Install 5000 lin ft of 2,000 mm RL, RLJ Bronze cable on hand		\$2,900	\$2,900
(b) Boxes, cable lugs and splicing	\$342.	350	692
(c) Install 3 - 1000 ampere breakers in Substation No. 3	1,275	675	1,950
(d) Install 3 - 1000 ampere ship to shore boxes	900	375	1,275
Total			\$6,817
Plus 10% contingency			682
			\$7,499
20% overhead and profit			1,500
Total estimate			\$8,999

Say \$9,000

III. For approval of location.

Enclosure (3) is a preliminary drawing prepared by Naval Station, Tacoma, and indicates the location of all ship to shore boxes and details of the proposed work.

IV. Method of accomplishment.

FOY contract

ENCLOSURE (2)

**U.S. NAVAL STATION
TACOMA, WASHINGTON**

NEW PROJECT CHECK-OFF LIST

Project: Provide additional A.C. 440 volt, three phase power on Pier 4

I. For predetermination of wages:

State - Washington
County - Pierce.
Nearest City - Tacoma

II. 1. Scope of work:

- (a) Run approximately 10,200 lineal feet of 750 mcm NML cable in 4 inch conduit
- (b) Install 3 - 1000 amp breakers in Substation No. 3
- (c) Install 3 - 1000 amp ship to shore boxes at Berths "L", "M" and "N" on Pier 4

2. Estimate of cost:	<u>Mat'l</u>	<u>Labor</u>	<u>Total</u>
(a) Install 3400 ft of 4 conduit @ \$1.50 per ft	\$5,100	\$4,000	\$9,100
(b) 10,200 ft of 750 mcm NML cable @ \$1.70 per ft	17,340	3,850	21,190
(c) Junction boxes conduit fittings	150	200	350
(d) Splicing		400	400
(e) 3 - 1000 amp ship to shore boxes	1,050	600	1,650
(f) 3 - 1000 amp disconnect	1,275	600	1,875
(g) Misc cable lugs and connections	75	50	125
Total	\$24,990	\$9,700	\$34,690

Total labor and material \$34,690
Plus 10% contingencies 3,470

\$38,160

20% overhead and profit 7,632

Total \$45,792

III. For approval of location

Enclosure (3) is a preliminary drawing prepared by Naval Station, Tacoma, and indicates the location of all ship to shore boxes and details of the proposed work.

**IV. Method of accomplishment.
NO contract**

ENCLOSURE (4)